

# PROFUSION<sup>®</sup>

H · E · A · T

## INSTRUCTION MANUAL

### Heavy Electric Utility Heater

Model: EH-4604B

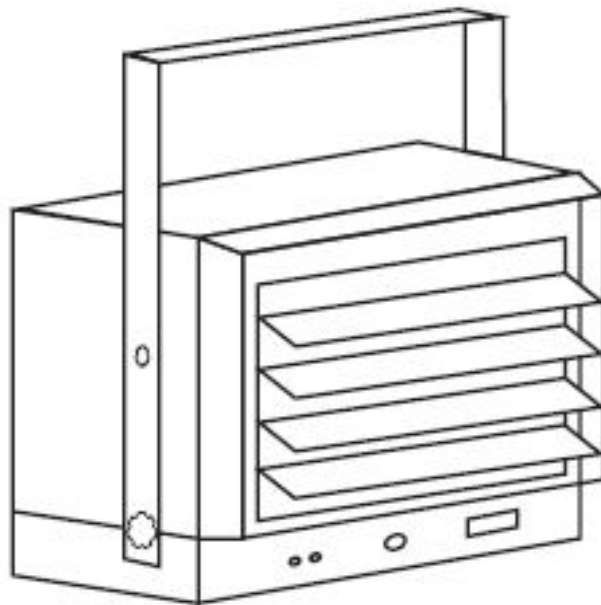


Figure 1

**PET OWNERS WARNING:** The health of some small pets including birds are extremely sensitive to the fumes produced during the first-time use of many appliances. These fumes are not harmful to humans but we recommended that you do not use your heater around birds and small pets during its initial use until the manufacturing corrosion coatings burn off.

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# IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read all instructions before installing or using this heater.
2. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.  
  
Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
3. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4. Always turn off the power of heater when not in use.
5. Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
6. Do not use outdoors.
7. This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
8. To disconnect heater, turn controls to off. and turn off power to heater circuit at main disconnect panel.
9. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
10. Connect to properly grounded outlets only.
11. To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may become blocked.
12. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
13. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
14. This heater may include a visual alarm to warn that parts of the heater are getting excessively hot. If the alarm illuminates, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise cause high temperatures. **DO NOT OPERATE THE HEATER WITH THE ALARM ILLUMINATING.**

## SAVE THESE INSTRUCTIONS

# DESCRIPTION

Electric utility heaters are designed to meet a variety of heating requirements by switching a few wires located in the base of the unit. Heat output is 25 589 BTU per hour. Features horizontal and vertical flow horizontal air flow. Built-in thermostat with overheating safety thermal cutout.

# SPECIFICATIONS

<u>Rating</u>	<u>AMPS</u>	<u>BTU/hour</u>
7500W II 240V	31.3	25589
6250W I 240V	26.1	21331

# GENERAL SAFETY INFORMATION



**: This heater requires hard wire installation (no plug). The installation of this product must be carried out by a Certified Electrician and in accordance with all local and national electrical codes.**

**NOTE: Compatible with a 240V Line Voltage Double Pole Wall**

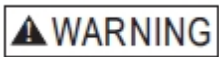
**Thermostat. Must be installed by a Certified Electrician.**



**Read and understand all installation and operation instructions and observe all safety instructions.**

1. Use only copper wires rated for at least 60°C.
2. Heater air flow must be directed parallel to or away from adjacent wall.
3. Observe wall, floor and ceiling clearance requirements.
4. All wiring must be done according to national and local electrical codes in the united states and the heater must be grounded as a precaution against possible electrical shock. Heater circuit must be protected with proper fuses.

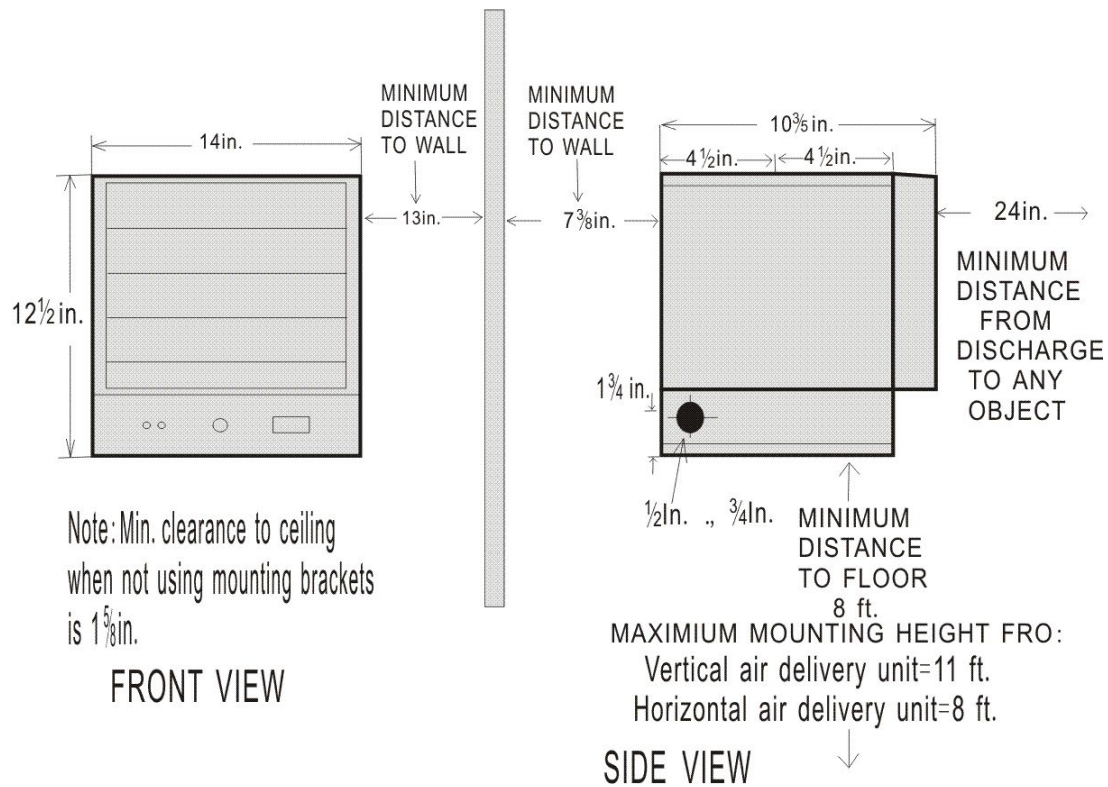
5. The mounting structure and the anchoring hardware must be capable of reliably supporting the weight of the heater and if used the mounting bracket.
6. All electrical power must be disconnected and the main service box must be locked before inspecting cleaning or servicing the heater. This is a precaution to prevent serious electric shock.
7. This heater is not suitable for use in hazardous locations as defined by the national fire protection association (NFPA) in the United States. This heater has hot and arcing sparking parts inside. Do not use it in areas where gasoline paint or flammable liquids are used or stored.
8. This heater is not suitable for use in corrosive atmospheres such as marine greenhouses or chemical storage areas.
9. This heater must be mounted at least 8 feet off the floor.



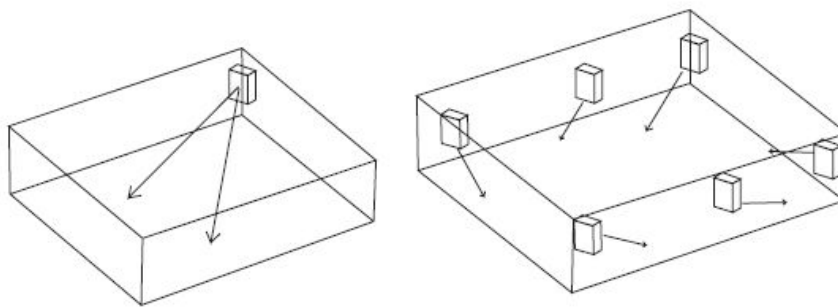
**WARNING** Improper installation or failure to follow the procedures outlined in this instruction manual can result in serious electrical shock.

## LOCATING HEATER

Install heater out of traffic areas maintaining clearances stated in figure 2. The direction of air flow should not be restricted by columns or machinery and the air flow should wipe exposed walls rather than blowing directly on them. When more than one heater is used in an area the heaters should be arranged so that the air discharge of each heater supports the air flow of the others to provide best circulation of warm air as indicated in figure 3.



**Figure 2**



**Figure 3**

# **INSTALLATION**

## **MOUNTING THE BRACKET**

Refer to Figures 4a and 4b.

1. Locate a wood stud in the wood ceiling joist. If you cannot locate a wood stud, you have to install a wood piece on the ceiling as this heater must be securely fastened.
2. Remove the mounting bracket from the heating unit by loosening bracket screws with a wrench and slipping the handle off over the screw heads.

3. Place a washer on screws before inserting through the holes in the mounting bracket and screw them securely into a ceiling joist.

**NOTE:** If you want to swivel the heater either to the right or left adding a washer to both sides of the bracket is recommended. A longer lag bolt may be required to properly secure the unit. See Figure 4a.

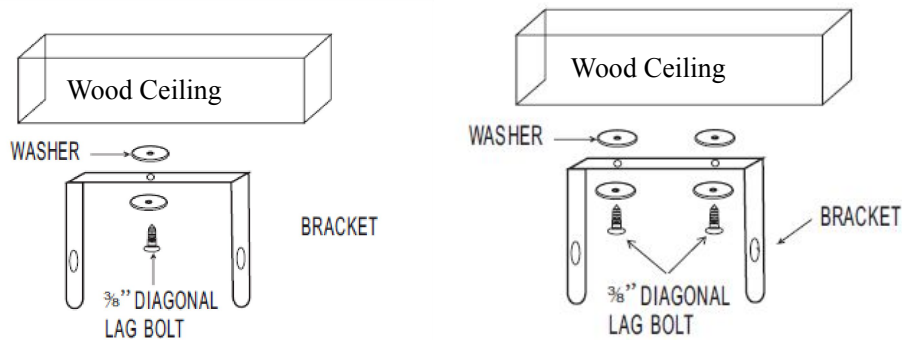
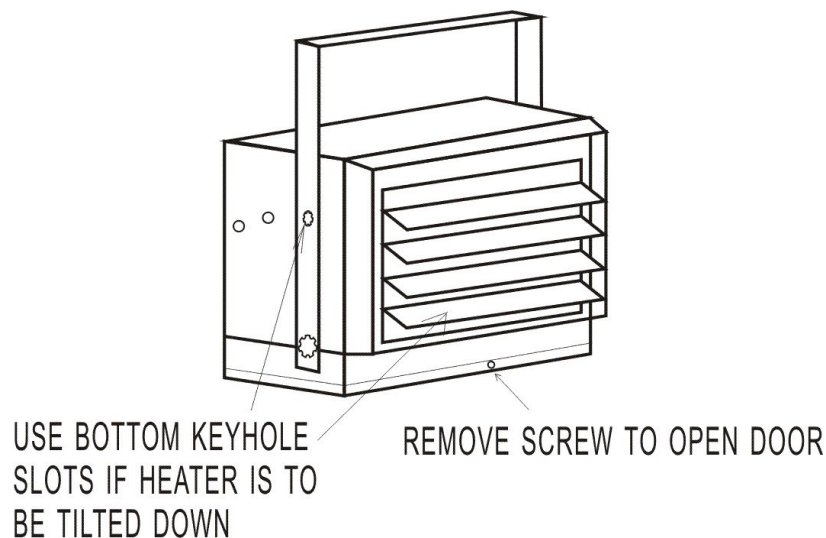


Figure 4a-single-Screw Mounting    Figure 4b-Double-Screw Mounting

## HANGING THE HEATER

- 1) Attach the heating unit to the mounting bracket.
- 2) Lift the heater up and into the mounting bracket.
- 3) Align the bracket screws with the keyhole slots in the mounting bracket.
- 4) If the heater is to be tilted it must be positioned in the keyhole slots - see **figure 5**.
- 5) Tighten the bracket screws with a wrench so the unit is securely suspended at horizontal or vertical level.



**Figure 5**

## ADJUSTING AIR FLOW DIRECTION

1. To turn the unit when it has been installed with a single lag bolt (as shown in figure 4a), simply turn the entire heater as needed. The unit cannot be turned horizontally if it has been installed with 2 lag bolts.

2. To tilt the unit vertically, loosen the bracket screws (see figure 5).

**NOTE:** For the heater to be tilted vertically, it must be mounted in bottom keyhole slots of mounting brackets to maintain adequate clearance and prevent possible overheating.

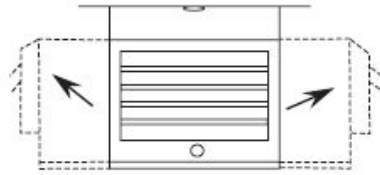


Figure 8

Rotate

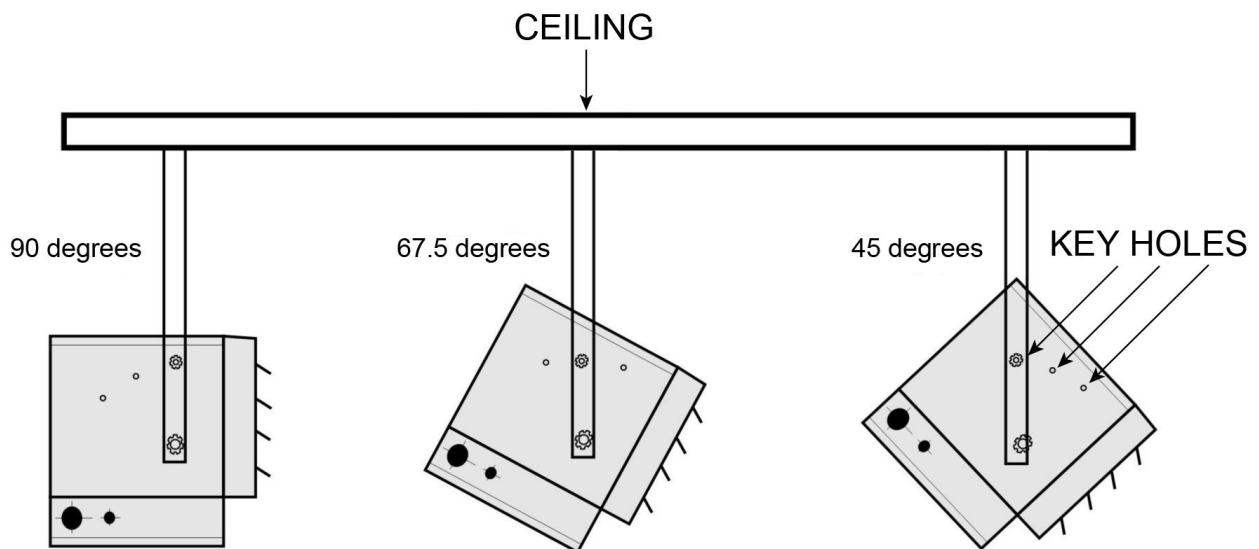
1. Adjust louvers to the desired position.

**NOTE:** The louvers are designed so they cannot be completely closed. Do not attempt to defeat this feature; damage to the unit can result.



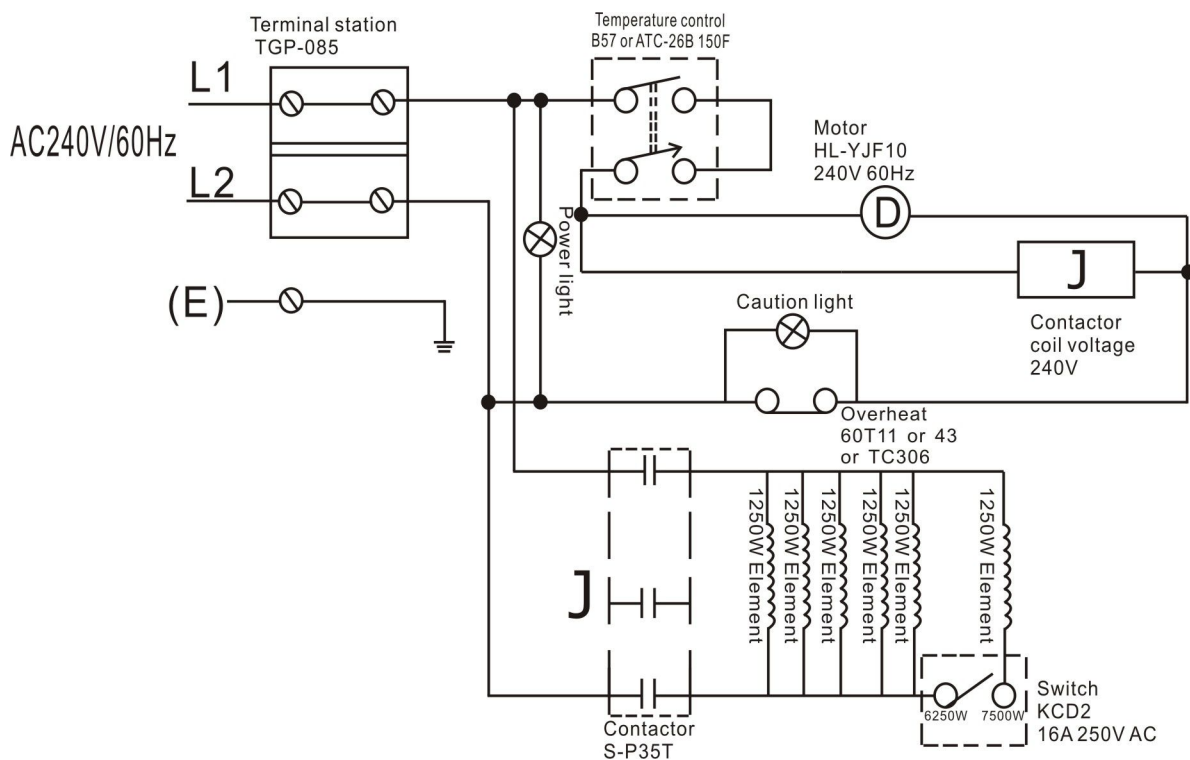
**WARNING** To prevent possible electric shock, disconnect power to the heater at the main service box before attempting to adjust the heat output of this unit.

#### MULTIPLE VERTICAL ANGLES



# CONNECTING THE POWER

HEATER RATING&VOLTAGE	HEATER AMPS	MAX.FUSE SIZE	MIN.WIRE SIZE 75°C COPPER
7500W@240V	31.3	45	#8
6250W@240V	26.1	35	#10*



**If you will use an external temperature control (external thermostat) to control the heater to be operated or not, please follow below attention points:**

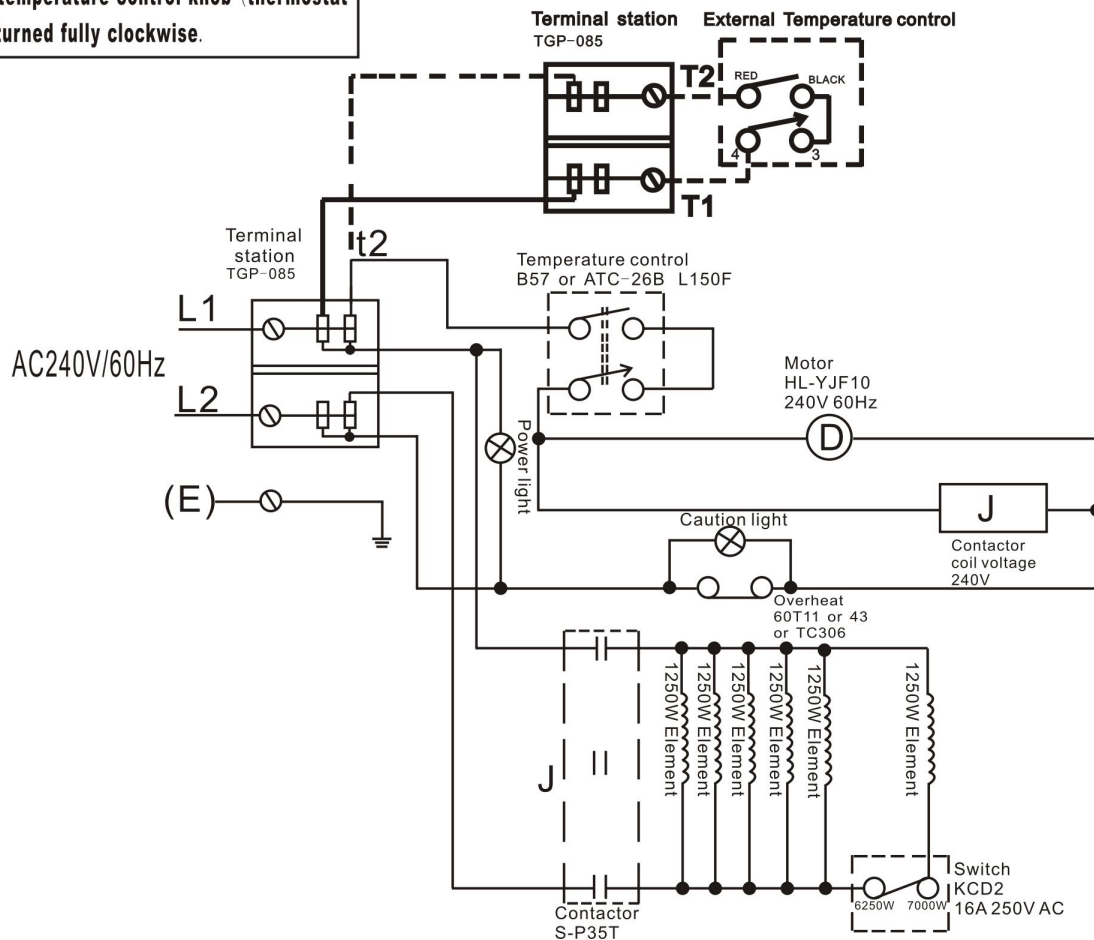
1. Make sure that the heater's temperature control knob (thermostat knob) is turned fully clockwise.
2. Connect the wire according to below wiring diagram.



**IMPORTANT NOTE:**

if you will use an external temperature control (external thermostat), make sure that the heater's temperature control knob (thermostat knob) is turned fully clockwise.

if you will use an external temperature control (external thermostat), pull out the  $t_2$  wire from the terminal station and insert it to the other terminal station's  $T_2$ .



3. The external temperature control ( external thermostat) should be in accordance with the requirement of UL or ETL standard.

4. The lead wire of external temperature control ( external thermostat) can not less than 14AWG.

## TO PROTECT THE HEATING ELEMENT

When start the heater, turning the temperature control in clockwise slowly to terminal, the unit starts the fan first then star the heating element.

When close the heater, turning the temperature control in anticlockwise slowly to off, the unit close the heating element first then close the fan.

**Warning: This appliance must be grounded!**

**Warning: The appliance must connect to a current protection circuit or device at 50Amp or less before being connected to power supply!**

1. Remove the screw from the front of the unit to connect the power to the heater.
2. Attach the cable connectors to the unit (See **Figure 6**) and slide the 10-gauge wire through the cable connector.

**NOTE: All wiring must be carried out by a Certified Electrician and must be in accordance to national and local electrical codes in the United States. For certain applications, conduit may be required, See Figure 6. Check local electrical codes. If you run the wiring in conduit and wish to be able to turn the heater be sure to purchase enough flexible conduit to allow the heater to be turned.**

3. Connect the wire to the power block located in the base of the heater - See **Figure 7**.
4. Turn on the power at the main service.

**CAUTION:**

High temperatures – risk of fire. Keep flammable materials, such as furniture, pillows, bedding, papers, clothes and curtains at least 3 ft. (0.9 m) from the front and top of the heater and keep them away from the sides and rear.

To reduce the risk of fire, do not use it in areas where gasoline, paint or flammable liquids are used or stored.

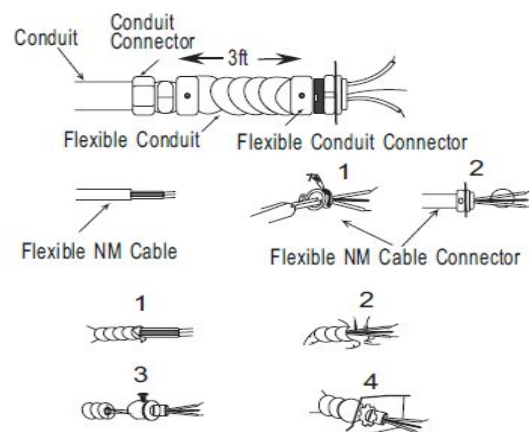


Figure 6-Connectors, cable, and hardware used to wire the heater

**Figure 6**

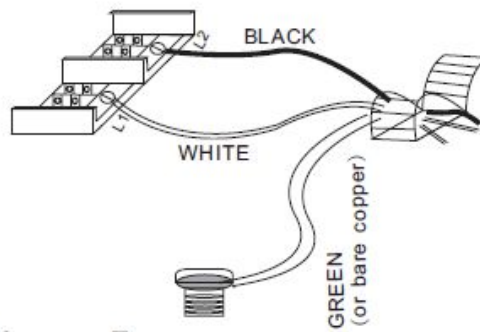
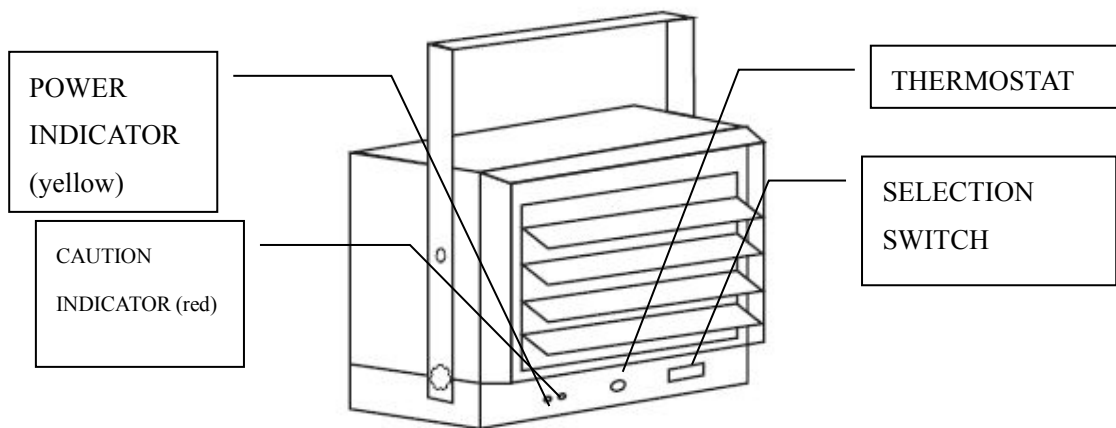


Figure 7

## OPERATING INSTRUCTIONS



**WARNING:** the heater must be properly installed before it is used.

### SETTING THE THERMOSTAT

- 1) Rotate thermostat knob clockwise to high position, POWER INDICATOR will turn yellow.
- 2) After room reaches desired comfort level rotate thermostat knob counter clockwise until the thermostat to OFF position.

**NOTE:** Heater will cycle on and off to maintain room temperature.

### SELECTION SWITCH

Using the **SELECTION SWITCH**, you can control the heating output: I for 6250W, II for 7500W.



Selection switch

## THERMAL CUT-OUT

The heater will automatically shut off when parts of it overheat. The heater will turn ON again when the abnormal temperature returns to normal levels. Should the unit overheat and cause the thermal cut-out to cycle, the cause of the overheating should be determined and corrective action taken before further operation.

**NOTE:** When the thermal cut-out is activated, the caution indicator will turn red. In this case, immediately turn the heater OFF and inspect for any objects on or adjacent to the heater that may cause high temperatures. **DO NOT OPERATE THE HEATER WITH THE CAUTION INDICATOR GLOWING RED.**

# MAINTENANCE INSTRUCTIONS

## MAINTENANCE AND CLEANING

1. Before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
2. To maintain the external appearance of the radiator, it need only be wiped over occasionally with a dry duster. During the summer months, or at other times when the appliance is not in use and is completely cold, It should be the best opportunity to wipe over with a damp cloth.
3. Do not use abrasive clearing powders or furniture polish. Do not use chemical or abrasive products, metallic scourers and so on, which may deteriorate the surface, to clean the appliance.
4. Clean the appliance with a dry and sooth cloth when it is not in use, and make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
5. During the summer months, or at other times when the appliance is not in use, disconnect the power supply, and cover the whole appliance with a dustcloth. Moreover, keep the appliance in a dry and cool place.
6. All other servicing should be performed by qualified service personnel. Do not try to repair the heater yourself.
7. To protect the heating element. When start the heater, turning the temperature control in clockwise slowly to terminal, the unit starts the fan first then star the heating element. When close the heater, turning the temperature control in anticlockwise slowly to off, the unit close the heating element first then close the fan.